



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

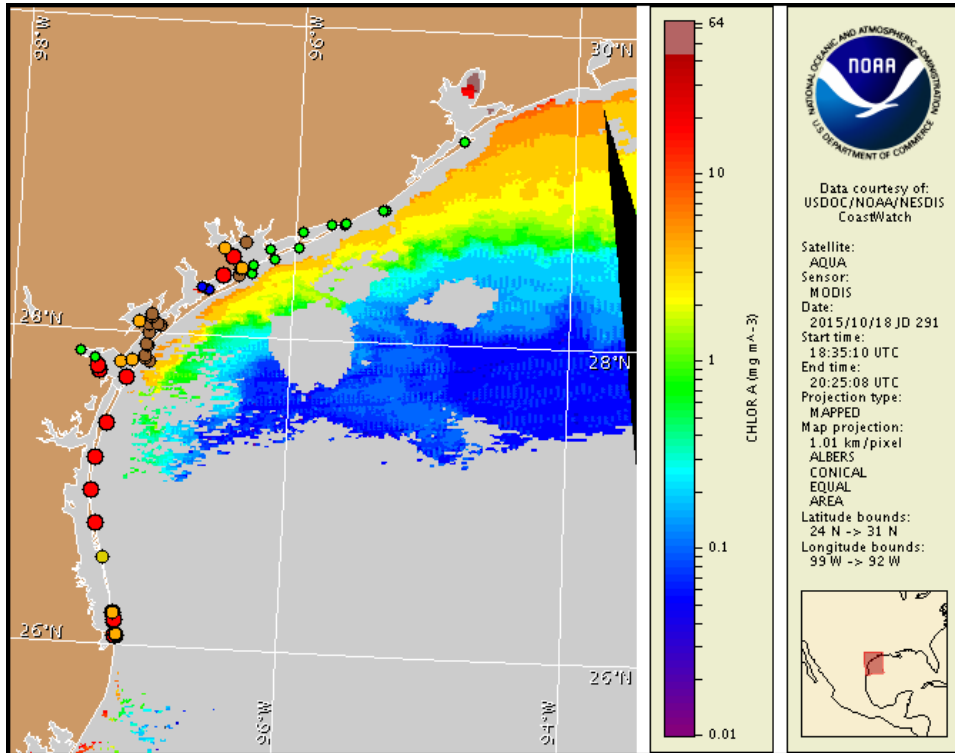
Monday, 19 October 2015

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Thursday, October 15, 2015



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from October 9 to 18: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf

Detailed sample information can be obtained through the Texas Parks and Wildlife Department at:

<http://www.tpwd.state.tx.us/landwater/water/enviroconcerns/hab/redtide/status.phtml>

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive:

<http://tidesandcurrents.noaa.gov/hab/bulletins.html>

Conditions Report

Karenia brevis (commonly known as Texas red tide) ranges from not present to high concentrations along the Texas coast from Galveston Bay to the Rio Grande. *K. brevis* concentrations are patchy in nature and levels of respiratory irritation will vary locally based upon nearby bloom concentrations, ocean currents, and wind speed and direction. The highest level of potential respiratory irritation forecast for Monday, October 19 through Thursday, October 22 is listed below:

Region: Forecast (Duration)

Bay region-Matagorda Bay: High (M-Th)

Bay region-San Antonio Bay to Espiritu Santo Bay: High (M-Th)

Bay region-Aransas Bay: Moderate (M-Tu), High (W-Th)

Bay region-Corpus Christi Bay: High (M-Th)

Aransas Pass to PINS region: Moderate (M-Tu), High (W-Th)

Bay region-Upper Laguna Madre: Moderate (M-W), High (Th)

Padre Island National Seashore region: High (M-Th)

Bay region-Lower Laguna Madre to Laguna Vista: Moderate (M-W), High (Th)

Mansfield Pass to Beach Access 6 region: High (M-Th)

Beach Access 6 to Rio Grande region: High (M-Th)

All Other Texas Regions: None expected (M-Th)

Check http://tidesandcurrents.noaa.gov/hab/beach_conditions.html for recent, local observations. Dead fish and discolored water have been reported in Corpus Christi Bay.

Analysis

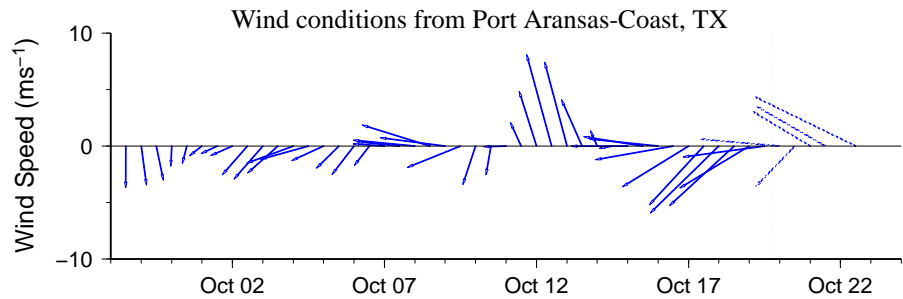
Karenia brevis concentrations range from 'not present' to 'high' from Galveston Bay to the Rio Grande, with the highest concentrations collected along the coast of South Padre Island at Beach Access Road 5 (TPWD; 10/15-19). Within the Aransas Bay region, sampling indicated *K. brevis* concentrations have remained unchanged and the Imaging Flow-Cytobot at UTMSI Pier in Port Aransas continues to observe *K. brevis* ranging between 'very low' to 'low' concentrations (TPWD, TAMU; 10/15-19). In the Corpus Christi Bay region, two 'medium' concentrations were collected and discolored water continues to be reported (TPWD; 10/15). Sampling in the Lower Laguna Madre continues to indicate up to 'low' *K. brevis* concentrations (TPWD; 10/16). Detailed sample information and a summary of impacts can be obtained through Texas Parks and Wildlife Department at: <http://www.tpwd.state.tx.us/landwater/water/enviroconcerns/hab/redtide/status.phtml>. For information on area shellfish restrictions, contact the Texas Department of State Health Services.

Recent MODIS Aqua imagery (10/18, shown left) is partially obscured by clouds along-shore from Sabine Pass to the Mustang Island region and is completely obscured by clouds along- and offshore from Padre Island to the Rio Grande, limiting analysis. Patches of elevated chlorophyll (2 to 8 $\mu\text{g/L}$) are present offshore the Texas coast from Sabine Pass to the Mustang Island region.

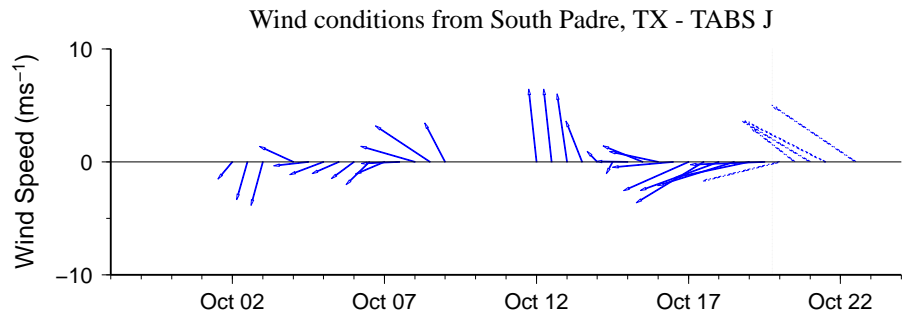
Forecast models based on predicted near-surface currents indicate a maximum bloom transport from coastal sample locations of 70 km south from Pass Cavallo, 70 km south from the Port Aransas region, and 150 km south from Brazos Santiago Pass from October

18 to October 22.

Yang, Davis

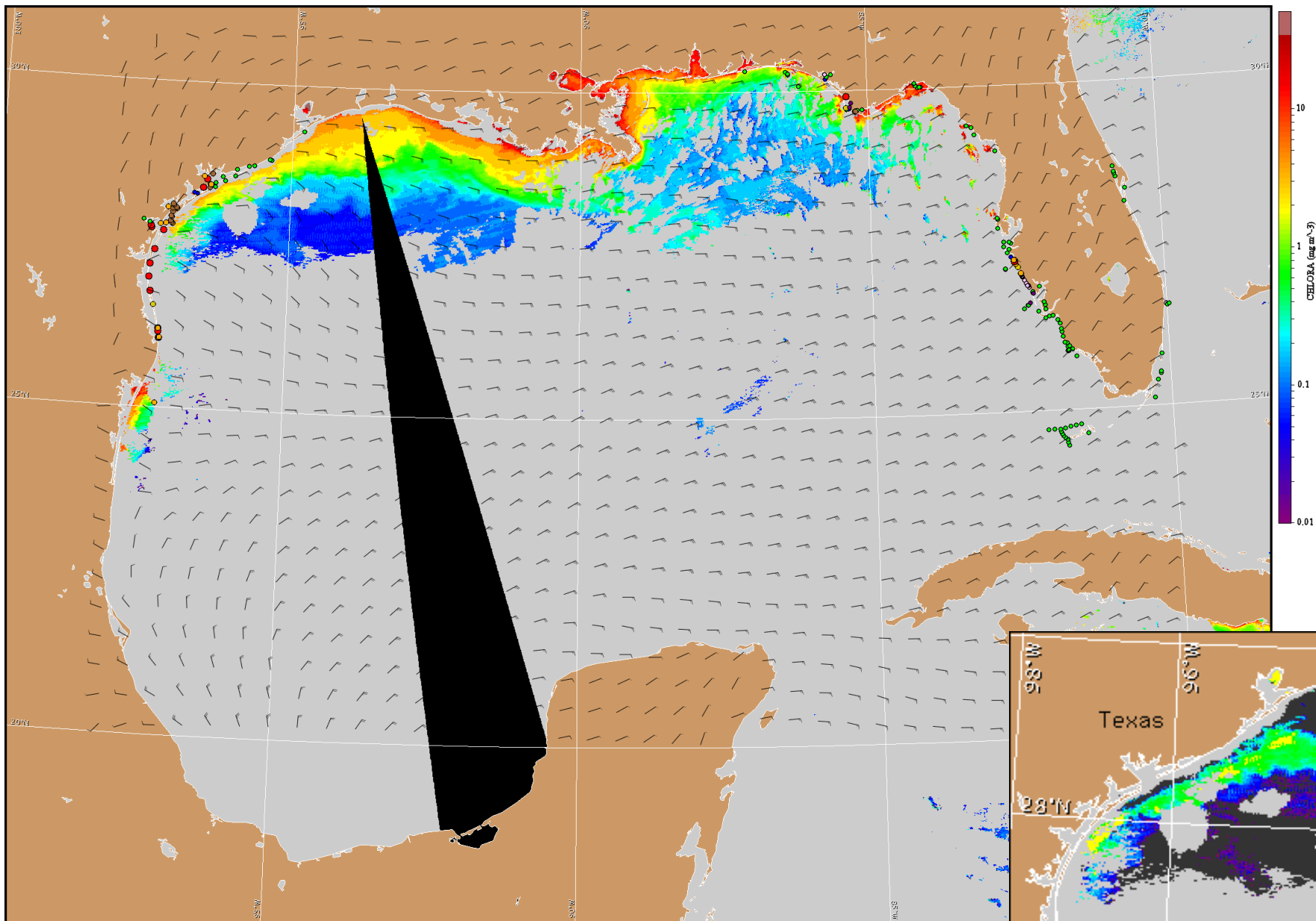


Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).



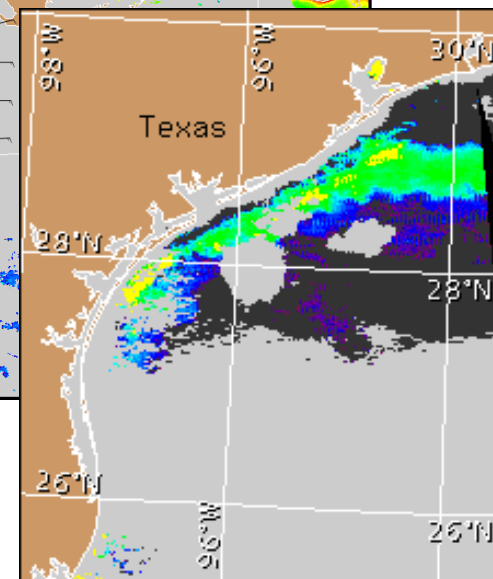
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Wind Analysis
Port Aransas to Baffin Bay: East winds (10-15kn, 5-8m/s) today. Southeast winds (10-20kn, 5-10m/s) Tuesday through Thursday.

Port Mansfield to the Rio Grande: East to southeast winds (8-21kn, 4-10m/s) today through Thursday.



Satellite chlorophyll image and forecast winds for October 20, 2015 12Z with points representing cell concentration sampling data from October 9 to 18: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

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Verified and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).